

What is claimed is:

1. An implantable medical device comprising:
 - a signal detector to provide cardiac activity signals;
 - 5 an atrial cardioverter/defibrillator to deliver an electrical energy;
 - a processor, coupled to the signal detector and the atrial cardioverter/defibrillator, to control the delivery of the electrical energy, the processor adapted to initiate a delay period in response to a request from an external device and initiate a delivery of the electrical energy after the delay period expires; and
 - 10 a programmable delay timer, coupled to the processor, to time the delay period.
2. The implantable medical device of claim 1, further comprising an atrial arrhythmia detector to detect an atrial arrhythmia, and wherein the processor is adapted to initiate the delivery of the electrical energy if the atrial arrhythmia is
- 15 detected after the delay period expires.
3. The implantable medical device of claim 1, further comprising a message generator, coupled to the processor, to generate a confirmation message confirming a receipt of the request.
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4. The implantable medical device of claim 3, further comprising a receiver/transmitter, coupled to the processor, to receive the request and transmit the confirmation message.
- 25 5. The implantable medical device of claim 3, further comprising a switch coupled to the processor, the switch operating in response to the request.
6. The implantable medical device of claim 5, wherein the switch operates in response to a magnetic field.

7. The implantable medical device of claim 6, further comprising a tone producer, coupled to the processor, to produce an audible tone indicative of the receipt of the request.

- 5 8. A system comprising:
an implantable device including:
a signal detector to provide cardiac activity signals;
an atrial cardioverter/defibrillator to deliver an electrical energy;
an implantable device processor coupled to the signal detector and the
10 atrial cardioverter/defibrillator, to control the delivery of the electrical energy, the implantable device processor adapted to initiate a delay period in response to an external request and initiate a delivery of the electrical energy after the delay period expires; and
a programmable delay timer, coupled to the processor, to time the delay
15 period; and
an external activator adapted to communicate the external request to the implantable device.

9. The system of claim 8, further comprising an atrial arrhythmia detector to
20 detect an atrial arrhythmia, and wherein the processor is adapted to initiate the delivery of the electrical energy if the atrial arrhythmia is detected after the delay period expires.

10. The system of claim 8, further comprising a programmer adapted to
25 communicate with the implantable device via telemetry, and wherein the implantable device comprises an implantable device receiver/transmitter, coupled to the implantable device processor, to transmit data to the programmer and to receive programming instructions from the programmer.

11. The system of claim 8, wherein the implantable device further comprises a message generator, coupled to the implantable device processor, to generate a confirmation message confirming a receipt of the external request.

5 12. The system of claim 11, wherein the implantable device further comprises a switch coupled to the implantable device processor, the switch operating in response to the external request.

10 13. The system of claim 12, wherein the switch operates in response to a magnetic field, and the external activator comprises a magnet creating the magnetic field.

14. The system of claim 13, wherein the implantable device further comprises a tone producer, coupled to the implantable device processor, to produce an audio tone indicative of the receipt of the external request, and wherein the external activator
15 further comprises:

a tone detector to detect the audio tone; and

an activator processor, coupled to the tone detector, to decode the detected audio tone.

20 15. The system of claim 14, wherein the external activator further comprises a display, coupled to the activator processor, to provide a visual indication confirming the receipt of the external request by the implantable device.

16. The system of claim 11, wherein the implantable device further comprises an
25 implantable device receiver/transmitter, coupled to the implantable device processor, to receive the external request from the activator and transmit the confirmation message to the activator, and wherein the external activator comprises:

an activator processor; and

an activator receiver/transmitter, coupled to the activator processor, to transmit the external request to the implantable device and to receive the confirmation message from the implantable device.

5 17. The system of claim 16, wherein the external activator further comprises an input adapted to receive the external request.

18. The system of claim 17, wherein the input is further adapted to receive a request for an immediate delivery of the electrical energy.

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19. The system of claim 17, wherein the input is further adapted to receive an instruction for withholding the delivery of the electrical energy.

20. The system of claim 17, wherein the input is further adapted to receive a value
15 of the delay period;

21. An implantable atrial cardioverter/defibrillator comprising:
 means for receiving a request from an external device;
 means for initiating a predetermined delay period upon receiving the request;

20 and

 means for delivering an atrial shock after the predetermined delay period expires.

22. The implantable atrial cardioverter/defibrillator of claim 21, further comprising
25 means for detecting an atrial arrhythmia, and wherein the means for delivering the atrial shock includes means for delivering the atrial shock if the atrial arrhythmia is detected after the delay period expires.

23. The implantable atrial cardioverter/defibrillator of claim 21, further comprising means for producing and transmitting a confirmation signal indicative of a receipt of the request.

5 24. The implantable atrial cardioverter/defibrillator of claim 23, wherein the means for receiving the request comprises switch means responsive to a magnetic field.

25. The implantable atrial cardioverter/defibrillator of claim 24, wherein the means for producing and transmitting the confirmation signal comprises means for producing
10 an audio tone.

26. The implantable atrial cardioverter/defibrillator of claim 23, wherein the means for receiving the request comprises means for receiving the request via a telemetry link.
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27. The implantable atrial cardioverter/defibrillator of claim 24, wherein the means for producing and transmitting the confirmation signal comprises means for transmitting the confirmation signal via the telemetry link.

20 28. An activator adapted for communicating with an implantable medical device producing an audio tone representing a message, the activator comprising:

a magnet to create a magnetic field detectable by the implantable medical device;

a tone detector to detect the audio tone;

25 a processor, coupled to the tone detector, to decode the audio tone; and
a display, coupled to the processor, to present the message.

29. The activator of claim 28, further comprising a receiver/transmitter, coupled to the processor, to communicate with the implantable medical device via telemetry.

30. The activator of claim 29, further comprising input circuitry adapted to receive a request for a delayed delivery of an electrical energy.

31. The activator of claim 30, wherein the input circuitry is adapted to receive
5 a request for a delayed delivery of an atrial shock.

32. The activator of claim 31, wherein the input circuitry is adapted to further receive a value of a delayed period associated with the delayed delivery of the atrial shock.

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33. The activator of claim 31, wherein the input circuitry is adapted to further receive a request for an immediate atrial shock.

34. The activator of claim 31, wherein the input circuitry is adapted to further
15 receive a request for withholding the delivery of the delayed atrial shock.

35. A method for delivering an atrial shock, the method comprising:
detecting a magnetic field indicative of a request for the atrial shock;
timing a duration during which the magnetic field is detected;
20 initiating a delay period when the duration exceeds a predetermined threshold;
and
delivering the atrial shock after the delay period expires.

36. The method of claim 35, further comprising detecting an atrial arrhythmia, and
25 wherein delivering the atrial shock comprises delivering the atrial shock if the atrial arrhythmia is detected after the delay period expires.

37. The method of claim 35, further comprising generating a confirmation message indicative of a receipt of the request when the duration exceeds the predetermined
30 threshold.

38. The method of claim 37, further comprising producing an audio tone indicative of the receipt of the request.